

## REMARKS

By the present Amendment, claim 25 has been amended to include the subject matter formerly recited in dependent claim 32 and claims 32 and 33 have been canceled without prejudice or disclaimer. In addition, claim 31 has been amended to correct the name of the compound recited in claim 25 and to place the format of the molecular weight in the same format of the other claims of record. Finally, claim 34 has been amended to recite the same molecular weight range previously recited in claim 25. Since all the recitations in the claims were previously considered, no new issues have been presented and entry of the instant Amendment is in order.

Independent claim 25 now recites a ballpoint pen which uses a water-based ink composition which comprises a defined amount of N-polyoxyalkylene-polyalkylenepolyamine having a defined molecular weight and an HLB of 8 or more or a cloud point of 50°C or higher and which contains a non-Newtonian viscosity-providing agent and has a viscosity of 100 to 4000 mPa·s at a shear speed of  $3.84\text{s}^{-1}$ . Independent claim 34 recites a ballpoint pen using a water-based ink composition which comprises at least a colorant, water and 0.1 to 30 % by weight of N-polyoxyethylenepolyoxypropylene block polymer having an average molecular weight of 20,000 to 80,000 and having an HLB of 8 or more or a cloud point of 50°C or higher and which contains a non-Newtonian viscosity-providing agent and has a viscosity of 100 to 4000 mPa·s at a shear speed of  $3.84\text{s}^{-1}$ .

The claims now of record are clearly patentable over the hypothetical combination of prior art set forth in the Official Action. Nakanishi et al., U.S. Patent No. 5,412,021, discloses a water-base erasable ink composition for use in marking pens which comprises: (a) water as a solvent; (b) a colorant dispersed or dissolved

in the water in an amount of 0.5-20% by weight: (c) a water soluble polyvinyl acetal resin as a film-forming agent in an amount of 0.1-15% by weight; and (d) an aqueous emulsion of an aliphatic carboxylic acid ester which is liquid and nonvolatile or only slightly volatile at room temperatures as a separating agent in a dry amount of 1-20% by weight. The ink composition preferably further comprises a polyoxyethylene polyoxypropylene block copolymer, or a lanoline derivative or both, as a writing separation assistant. As set forth at column 5, lines 30-40, the patent states that the polyoxyethylene polyoxypropylene block copolymer has a molecular weight of 700 to 3,000 and in column 6, lines 30-40, the patent cautions against adding too much of the lanoline derivative which causes excessively large viscosity. The ink composition is used for writing on a white board as specifically noted in the Field of the Invention at column 1, lines 6-9.

The claims of record all relate to a ballpoint pen which is different from a marking pen for a white board that is expressly identified by Nakanishi et al. Furthermore, the patent does not disclose the N-polyoxyalkylenepolyalkylene-polyamine of claim 25 or the N-polyoxyethylenepolyoxypropylene block polymer of claim 34 and certainly not the molecular weight of 20,000 to 80,000 associated with these materials. Indeed, by disclosing that the polyoxyethylene polyoxypropylene block copolymer has a molecular weight of 700 to 3,000, Nakanishi et al. would lead those of ordinary skill in the art away from this aspect of the invention. In this respect, it is well established that evidence that supports rather than negates the patentability of an invention must be fairly considered, *In re Dow Chemical*, 5 USPQ2d 1529, 1532 (Fed. Cir. 1988).

Nakanishi et al. is further deficient in failing to disclose the claimed non-Newtonian viscosity providing agent recited in claims 25 and 34 and given the

distinction between a ballpoint pen ink composition and a marking pen for white boards, those of ordinary skill in the art would not necessarily seek to add such an agent to the ink of Nakanishi et al.

The substantial deficiencies of Nakanishi et al. are not remedied by Bui et al., U.S. Patent No. 5,554,212. Bui et al. does not relate to writing instruments, either the claimed ballpoint pen or even a marking pen for a white board. Instead, the patent relates to a water-fast high gloss hyperthermogelling aqueous phase change ink that is designed for an ink jet printer. The ink is specifically composed to gel when its temperature is increased to its thermo-inversion point or when the concentration of the hyperthermogelling component is increased by evaporation or substrate absorption of water from the ink. In order to achieve the hyperthermogelling activity, a hyperthermogelling component is used which is a nonionic surfactant, such as an ethylene oxide propylene oxide block copolymer surfactant.

The proposed combination expressed by the Examiner unquestionably and improperly relies on applicants' own specification. Not only does Bui et al. not relate to any writing instrument, much less the marking pen for a white board specifically referred to by Nakanishi et al., the patent uses ethylene oxide propylene oxide block copolymer for a totally different reason. In particular, in Nakanishi et al., the disclosed nonionic surfactant, such as Pluronic L-64 is used as a separation assistant in order to achieve improved erasability (column 2, lines 48-57). In contrast, the ethylene oxide propylene oxide block copolymer of Bui et al. is used as hyperthermogelling activity. Accordingly, not only would those of ordinary skill in the art not look to the phase change ink of Bui et al. to modify the marking pen ink for white boards of Nakanishi et al., such individuals would certainly not seek to use a

hyperthermogelling component that has no applicability in the marking pen ink of Nakanishi et al. Moreover, the Examiner has had to further ignore the exemplified material in Bui et al. and rely on the general molecular weight range. Still further, the claims recite a defined fairly high viscosity. Since Bui et al. is directed to a different type of material, it is of no surprise that low viscosities are reported in Table IV in column 8 which is consistent with its use as with an ink jet printer. Thus, when all these factors are considered together, as one must, this combination of patents is clearly improper and even if a proper basis for combining them existed, would still not result in the invention defined in the claims of record.

Realizing that the combination of Nakanishi et al. and Bui et al. was still deficient, the Examiner further relied on Murakami et al., U.S. Patent No. 4,793,860. Murakami et al. relates to an aqueous ink composition comprising a dye, a polyhydric alcohol and water which can be used as an ink for writing instruments, such as a ballpoint pen, marker, fountain pen or for a recording apparatus including a pen blotter and an ink-jet printer. In the passage beginning at column 9, line 54, the patent further indicates that various additives, such as a water-soluble preservative, an anti-mold agent, a surfactant, and a pH adjusting agent can be added.

Just because the composition of Murakami et al. can be used with different writing instruments does not mean that any composition can so be used. As noted above, Nakanishi et al. explicitly states that the composition is for a marking pen for a white board. This is not a ballpoint pen which has implicitly been conceded by the Examiner. There would be no reason (absent further improper resort to applicants' specification) to ignore the fact that neither Nakanishi et al. nor Bui et al. relate to a ballpoint pen and despite this deficiency to place the modified composition in a

ballpoint pen. Alternatively, the proposed combination would result in an improper "obvious to try" scenario.

For all of the reasons set forth above, applicants respectfully request reconsideration and allowance of the present application.

Should the Examiner have any questions concerning the subject application, the Examiner is invited to contact the undersigned attorney at the number provided below.

Respectfully submitted,

BUCHANAN INGERSOLL PC

By: Robert G. Mukai  
Robert G. Mukai  
Registration No. 28,531

P.O. Box 1404  
Alexandria, Virginia 22313-1404  
(703) 836-6620

Date: June 8, 2006